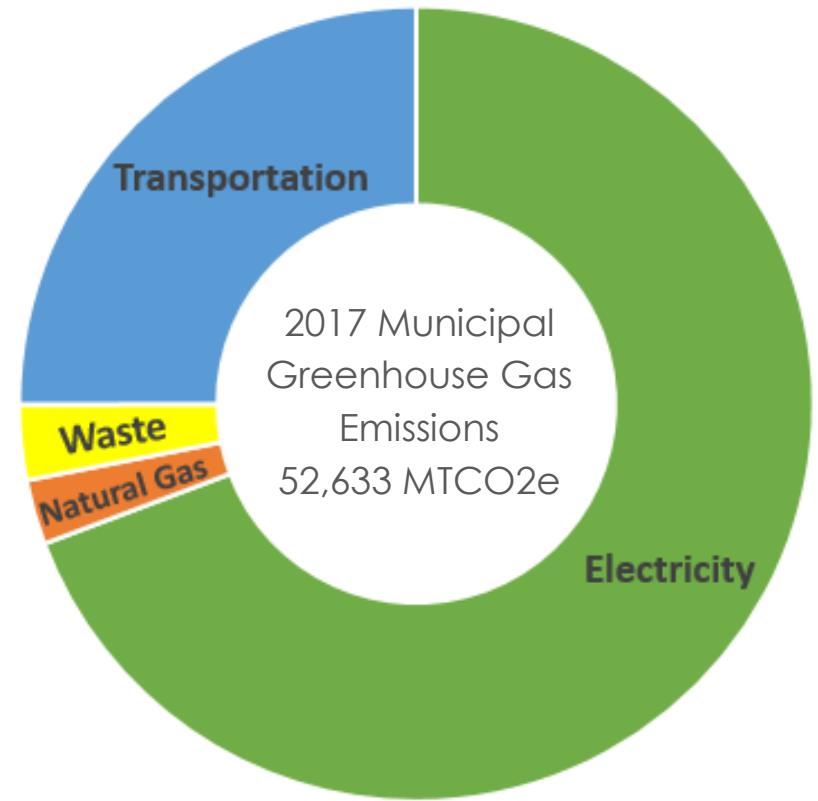
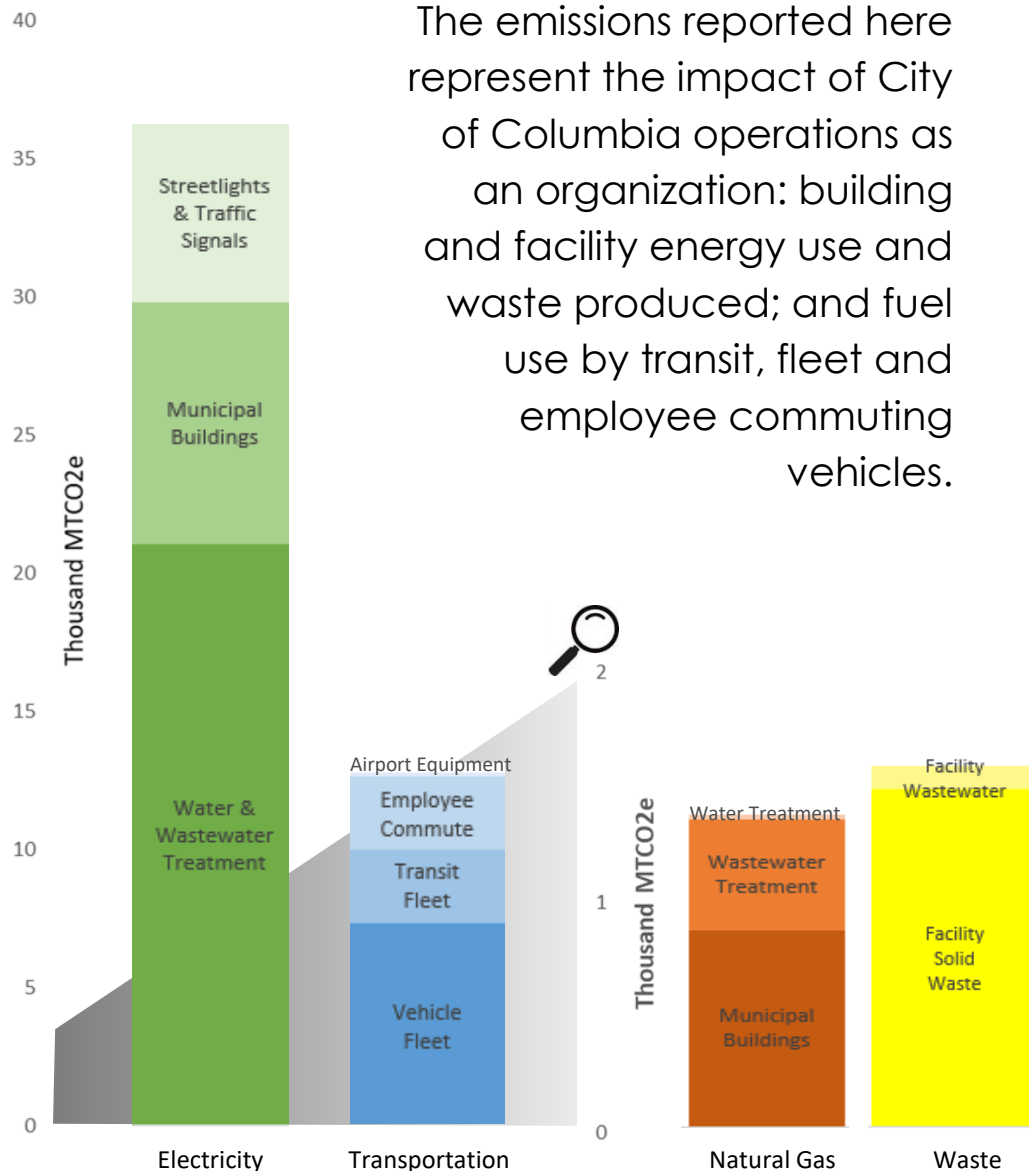


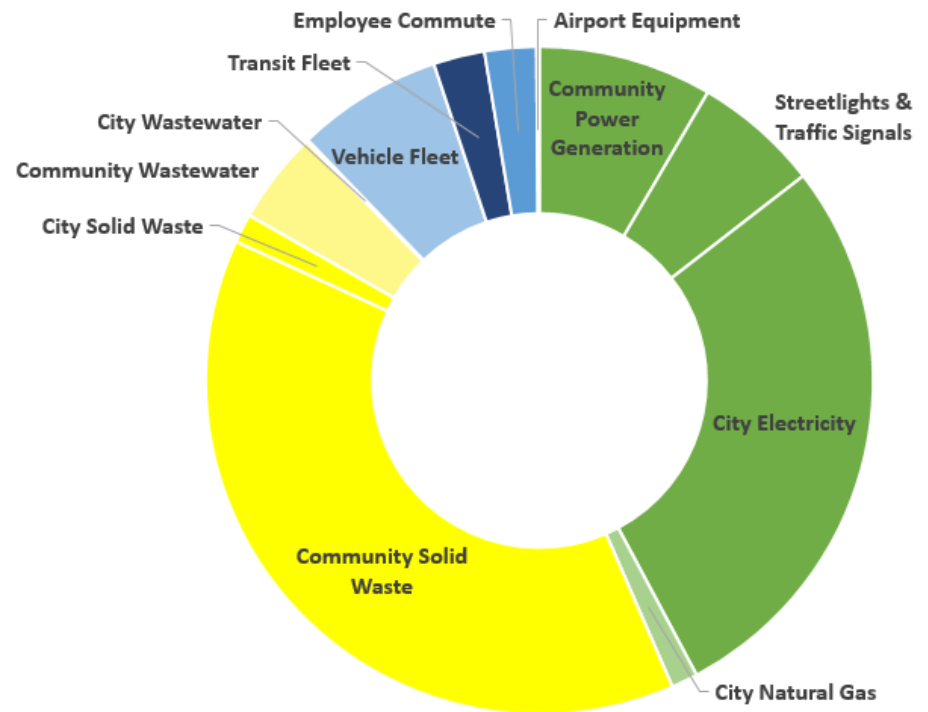
City of Columbia 2017 Municipal Emissions Report



This report includes emissions associated with energy use and waste produced by municipal operations only. Community energy production and waste treatment process emissions account for an additional 55,342 MTCO2e.

2017 Municipal Emissions Including Community Power Generation & Community Waste Processing Emissions

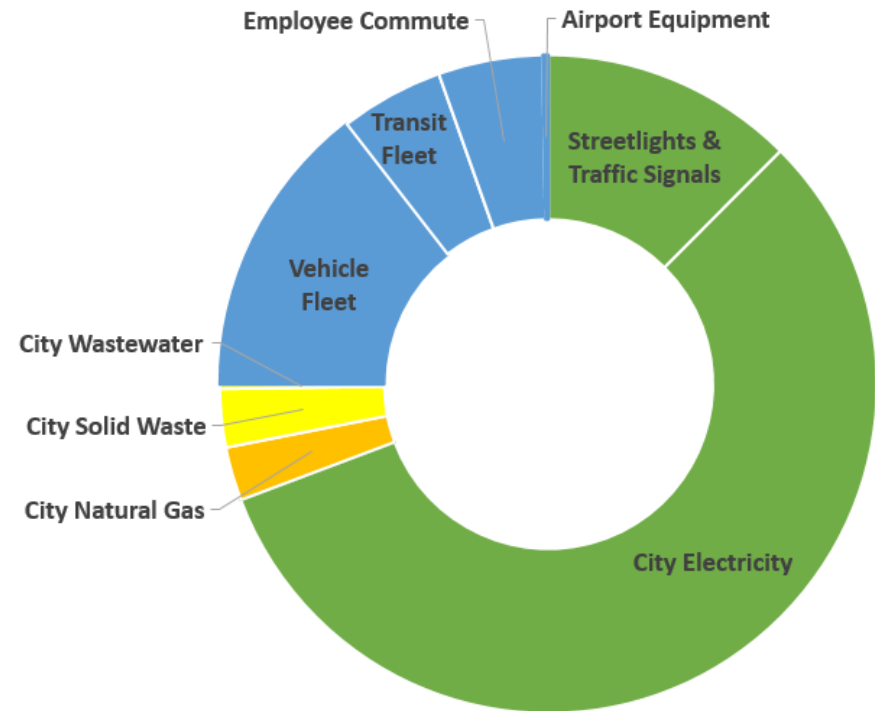
Total GHG Emissions by Sector & Source		MTCO2e
Energy		46,944
	Community Power Generation	9,092
	Streetlights & Traffic Signals	6,567
	Facility Electricity	29,898
	Facility Natural Gas	1,387
	Airport Fuel Oil	
Waste		47,863
	Community Solid Waste (Landfill)	41,431
	City Solid Waste	1,505
	Wastewater Treatment	4,820
	City Wastewater	107
Transportation		13,169
	Vehicle Fleet	7,639
	Transit Fleet	2,680
	Employee Commute	2,701
	Airport Equipment	149
TOTAL		107,975



Columbia, MO provides a full range of services to the community, including electricity, solid waste and wastewater treatment. These services also contribute to the greenhouse gas emissions for Columbia as a community and a municipal organization. The above calculations include emissions from both municipal operations and community services provided. Emissions from the electricity generating assets controlled by the City of Columbia represent 9,029 MTCO2e (8%) of the 2017 municipal inventory. Community solid waste and wastewater emissions total 46,251 MTCO2e (43%) of the 2017 municipal inventory. Reporting total emissions from these municipally controlled waste and energy sources is important and will continue to inform broader process changes and our progress toward meeting reduction goals. In order to more directly report the impact of our daily operations on the municipal inventory, the analysis below removes emissions of non-municipal activities from the energy and waste sectors.

2017 Emissions from Municipal Operations

Total GHG Emissions by Sector & Source		MTCO ₂ e
Energy		37,852
	Streetlights & Traffic Signals	6,567
	Facility Electricity	29,898
	Airport Fuel Oil	149
	Facility Natural Gas	1,387
Waste		1,612
	Facility Solid Waste	1,505
	Facility Wastewater	107
Transportation		13,169
	Vehicle Fleet	7,639
	Transit Fleet	2,680
	Employee Commute	2,701
	Airport Equipment	149
TOTAL (excluding non-municipal energy, waste and wastewater process emissions)		52,633



The distribution of City of Columbia's operational emissions across sectors resembles that of the Community's sector emissions. 72% of emissions come from facility energy, 25% from transportation and 3% from waste process emissions. Electricity usage by City facilities and buildings accounts for 79% of energy emissions and 57% of all operations emissions. Streetlights and traffic signals account for 17% of energy emissions and 12% of all operations emissions. Facility use of natural gas and fuel oil (airport use only) make up the remaining 3% of energy emissions and represent 3% of total operational emissions.

Municipal waste emissions are made up of wastewater at 7% and solid waste at 93%. They are the fraction of total process emissions from the municipal landfill and wastewater treatment plant estimated to be from municipal wastewater and solid waste.

Transportation emissions are comprised of Columbia Regional Airport equipment, City of Columbia's fleet and transit vehicles, and employee commute activity. Fleet vehicle activities make up 58% of municipal transportation emissions and 15% of total operational emissions. Transit activities contribute 20% to transportation and 5% to total municipal operation emissions, and employee commute contribute 21% and 5%, respectively.